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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,907	12/26/2001	Yun-Ho Jung	8733.565.00	7489

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EXAMINER

PADGETT, MARIANNE L

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/025,907	JUNG, YUN-HO	
	Examiner	Art Unit	
	Marianne L. Padgett	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over IM (6,368,945), as applied in section 11 of the paper mailed 11/14/03, with further discussion in section 6 of the 4/12/04, mailed and section 6 of 10/21/04 mailed, and below.

Applicant's have amended their claims to clarify the language (removes 112 problems discussed in sections 2-4 of the 10/21/04 action), however all the changes or clarifications, except the addition of the last 2 lines to independent claims 5 and 11, are consistent with previously discussion of IM (945), because the columns therein correspond to the claimed blocks, with the X direction translations corresponding to the several micrometer stepping within the block, and the starting a new column to stating a new block.

While the new limitations added at the end of the independent claims have the potential for differentiating from IM, whose column \equiv block extend from one edge to the other, no processing or crystallization is ever claimed or associated with the stage being stepped in a 2nd direction perpendicular to the first, hence this may merely read on a step which removes the substrate and/or mask from the processing area, because it is finished, which could have been in any direction that is convenient to configurational and space constraints, thus lacks any necessary patentable significance. In other words, it would have been obvious to one of ordinary skill in the art, that when the process of IM was complete, to remove substrate and stage from their relative association with the mask and laser system, which would have been conveniently done by stepping the entire stage out from under it, which could have been in either the X- or Y-direction, for equivalent effect depending on configurational space constraints with the

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Y-direction thus reading on claims as written (since they fail to give adequate context to the purpose for which applicant's claim stepping the stage in a 2nd direction). On page 10 of the remarks, 3rd paragraph, applicant's argue that the method claims require crystallizing blocks in a second row, but as presently written, the claims (5 or 11) never require any thing to be done to any second row of blocks. Applicant's arguments appear to be directed to arguing against rejections to limitations that have never yet been present in the claims, so can not have yet been rejected, and that the examiner has thus not made.

3. Claims 5-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have added new limitations for stepping the stage in second direction after completing all block's crystallization in the 1st direction, but given no support therefor. A quick review of the figures, shows no irradiation pattern that suggest shifting in any direction but one, i.e., essentially like IM, showing only linear array of blocks. Nor was any discussion of a 3D array of blocks and/or the claimed second direction shift and implied (and argued) next row of blocks found in the body of the specification. While [0043] discusses options of X and Y axis directions, they are equivalently presented as the movement after crystallizing one block, not alternately used or used in the claimed series of steps after a row of blocks. For these reasons, lacking a showing in the original specification, the claims as amended appear to contain New Matter.

4. Other art of interest includes Kim [et al] (2004/0235279 A1 and 2004/0201019 A1), who in fig.11-12 or fig. 8-9, respectively may teach irradiation patterns contemplated by applicant (but of uncertain support and not clearly claimed intent), but the Kim references are not prior art.

The copending cases of applicant (Jung), as shown in the published applications 2005/0040148 A1 and 2004/0266146 A1, may relate to the intent of applicant's amendments, but at present, for the

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current claim language it is not clear if they do not, but obviousness double patterning with Im (945) as a secondary reference could be considered depending on clarification.

5. Applicant's arguments filed 1/19/05 and discussed above have been fully considered but they are not persuasive.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on Monday-Friday about 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. L. Padgett/af
April 21, 2005
May 18, 2005

A handwritten signature in black ink, appearing to read "Marianne Padgett", with a long horizontal flourish extending to the right.

MARIANNE PADGETT
PRIMARY EXAMINER